2020

RANGER OILFIELD UPPER JAW MODIFICATIONS

EST. 1987

DIE AREA

DIE CARRIER
R-801327

DIE
R-30160380-500

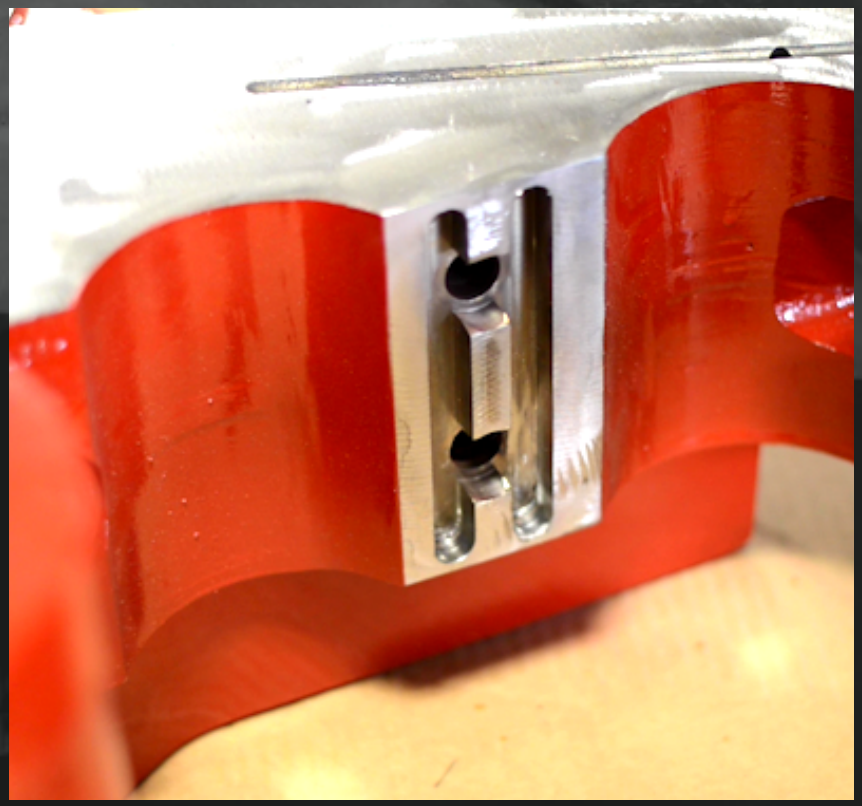
PISTON ASSEMBLY
R-30160658

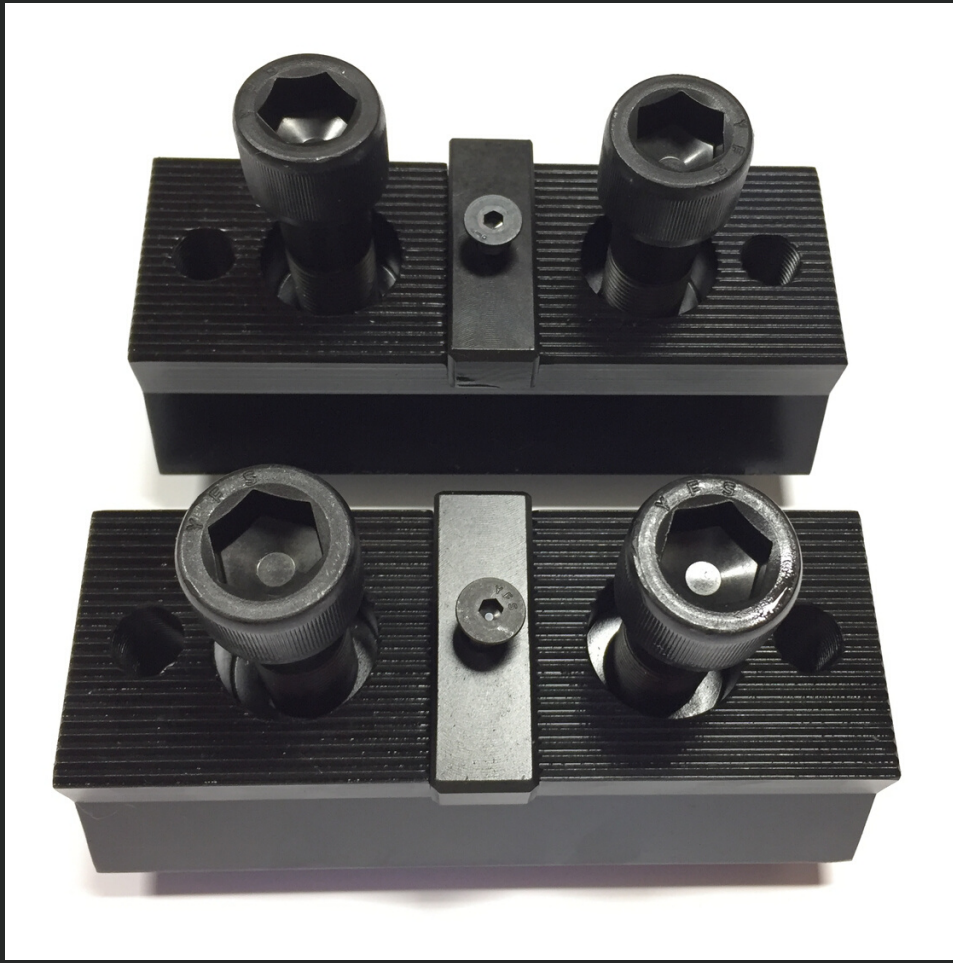
MODIFIED RETAINERS

MODIFIED BUSHINGS

DIE AREA

Ranger will take the OEM jaw, precision machine channels to accept our die carriers. This modification also allows for our through-bolt method, which eliminates the need for tapping and enables a backing nut for better securing to the jaw. OEM die placement increases chances for bolt shearing and ultimately jaw failure. Our modifications decrease wear on the jaw, increase assembly integrity, and save our customers money.



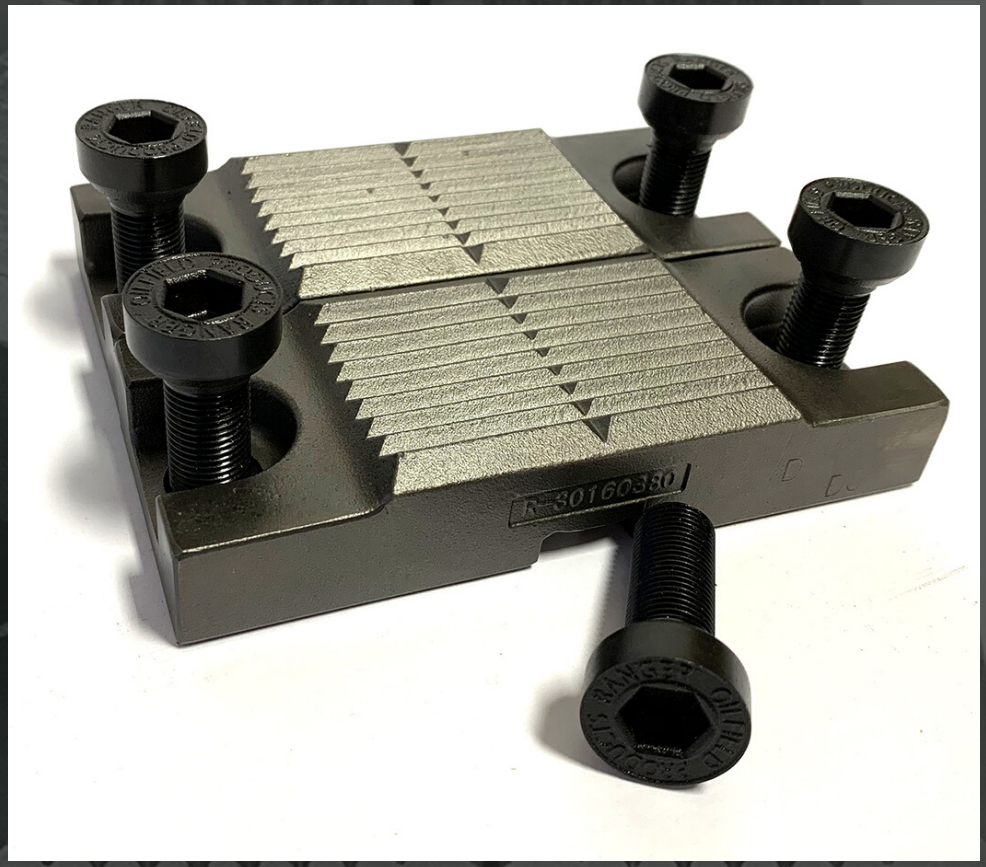


DIE CARRIER

Our die carrier is machined from upgraded 514 T1 steel. The machining process allows for a precision fit to the jaw limiting contact fatigue. Our die carriers also go through the quench, polish, quench (QPQ) treatment to increase case hardness and act as rust prevention. This extra step increases the life span of our product. This modification allows the die or die carrier to be replaced in minutes, rather than the possibility of replacing the entire upper jaw assembly because of wear.

DIE

Ranger dies are cast and machined to seamlessly couple with our die carrier. Full contact across the die drastically increases the lifespan of this product. Our R & D team has designed radiuses into nearly every edge to increase the functional strength and eliminate common stress fracture locations. We also sell our dies with custom Ranger low profile bolts. These bolts are key to limiting potential contact and causing die fractures.



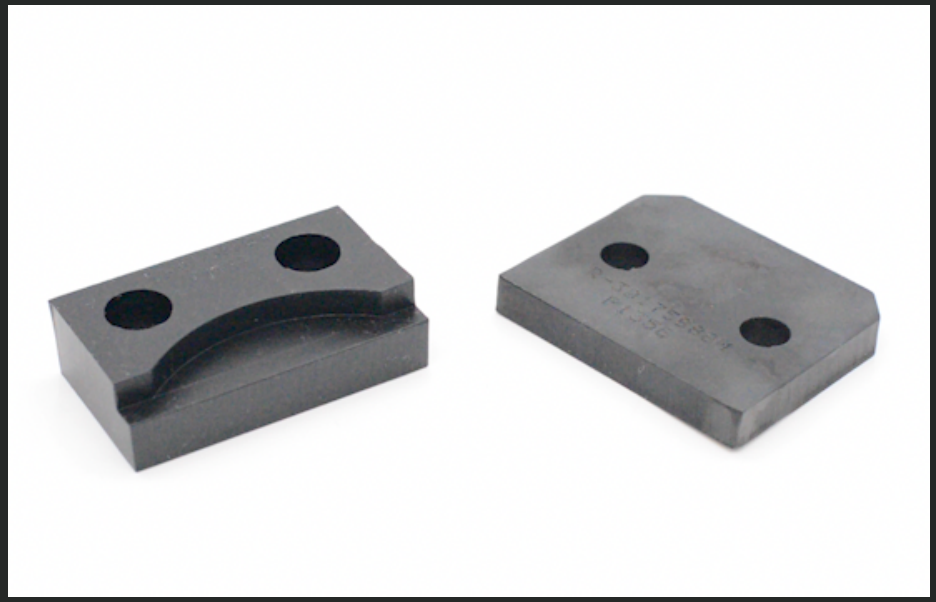
PISTON ASSEMBLY SHAFT

We put the piston shaft through the QPQ process. This eliminates several common issues with the piston assembly. This process provides rust and corrosion protection and increases the lubricity of the assembly while increasing the surface hardness.

MODIFIED BUSHINGS

All of our upgraded bushing are made from aerospace-grade nickel aluminum bronze. There are 6 locations on the upper jaw where we oversize the OEM bore to replace the thin garlock bushing with the Ranger bushing. The modified bushings reduce premature bore failure due to wear.

MODIFIED RETAINERS



CLAMP CYLINDER RETAINERS

We have increased the thickness from 1/4" to 1/2" for a more reliable hold. We also put these retainers through the QPQ process for corrosion prevention.

MAIN HINGE PIN RETAINER

We have increased the thickness 3/8" to 3/4" and recessed into the jaw reducing stress on bolts. We also increase the bolt size from 3/8" to 1/2".